

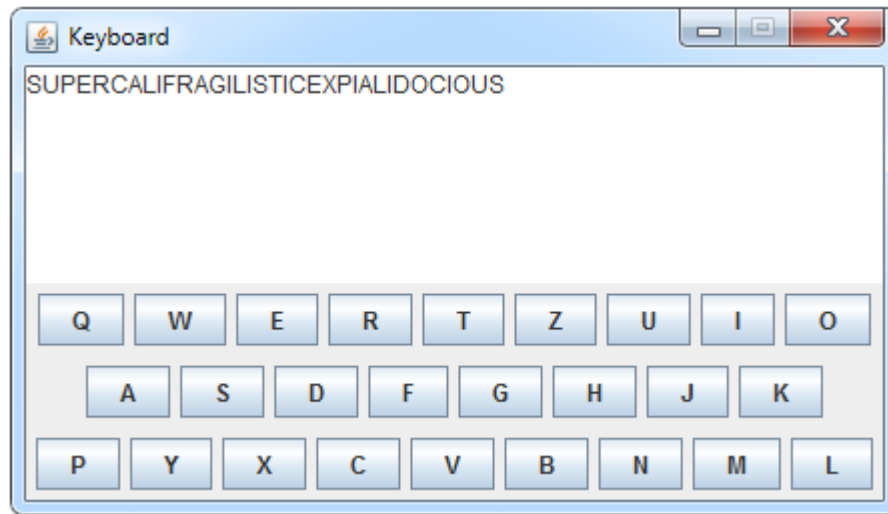
Homework 6

CMSY-199, Fall 2013

Upload your solution to the Canvas course website as a zip archive file prior to the start of class on Monday, December 2.

Please note that you are *not* allowed to use a GUI Builder such as the one in NetBeans to complete this assignment.

1. Write a class called `KeyboardUI` which *is* a `JFrame` from the `javax.swing` package.
2. Make the `KeyboardUI` class a Java application by adding a `main` method with a single line of code that creates an instance of the `KeyboardUI` class named `keyboard`.
3. In addition to the `main` method, the `KeyboardUI` class *has* a member variable of type `TextArea` called `screen` and a no-argument constructor.



4. Write code in the no-argument constructor to:
 - (a) Call the constructor of the superclass with the argument "Keyboard"
 - (b) Set the resizable property to false.
 - (c) Set the default close operation to exit on close.
 - (d) Set the width to 300 pixels and the height to 500 pixels.
 - (e) Set the layout to a `GridLayout` with 2 rows and a single column.
 - (f) Set the editable property of `screen` to false.

- (g) Set the line wrap property of `screen` to true.
 - (h) Add the `screen` object.
 - (i) Create a `JPanel` called `keyboardPanel` which has a `GridLayout` with 3 rows and a single column.
 - (j) Create a 3-element array of `JPanel` called `keyRows`.
 - (k) Create and add `JButton` objects to each row as shown in the figure above.
 - (l) Set the focusable property of each `JButton` to false.
 - (m) Add each row of keys to the `keyboardPanel`.
 - (n) Add the `keyboardPanel`.
 - (o) Pack the components.
 - (p) Set the visible property to true.
5. Make the `KeyboardUI` class implement an `ActionListener` interface from the `java.awt.event` package.
 6. The `ActionListener` interface requires that you implement a method called `actionPerformed` which takes an argument of type `ActionEvent` and has a return type of void. Write the `actionPerformed` method to print the letter of the `JButton` which the user has clicked.
 7. Add an `ActionListener` to each button as it is created in the constructor.